

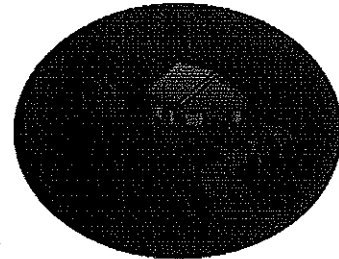
## Example Items 1 and 2

Read the article "Technology Nation: A Unique Vision" and answer questions 1 and 2.

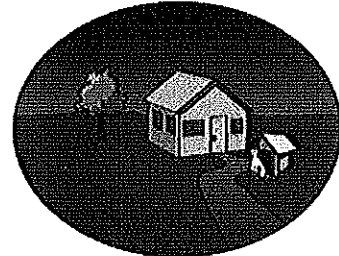
**Technology Nation: A Unique Vision**

Have you ever noticed how some *nocturnal* animals, or animals that are active at night, seem to get around so effortlessly in the dark? That is because nocturnal animals have better night vision than humans. Some nocturnal animals have larger eyeballs, while others have pupils that expand wider. Both of these help their eyes take in more light in low-light conditions. This means nocturnal animals can see easily when humans normally cannot.

But with the help of technology, humans have found a way to *simulate*, or recreate, night vision in order to see in the dark. Developed and improved over decades, several night vision devices are now available. They are used for many different reasons. Night vision devices are used in law enforcement, hunting, security systems, navigation, and the military. We at *Technology Nation* (TN) interviewed research specialist Sergeant Sarah Tyson, a member of the U.S. Army, to give us more information about how night vision works and where it came from.



Standard Vision



Night Vision

**TN:** *Sergeant Tyson, when did night vision research begin in our country?*

**Sergeant Tyson:** Around 1945, the Army realized that we could develop the technology to see at night. Night vision devices would greatly help our soldiers who need to see in the dark. Our research departments came up with a night vision scope that was given to 300 soldiers. This first type of night vision device worked by projecting a special beam of light similar to a flashlight beam but undetectable to the naked eye. The beam would then reflect off objects and bounce back to the lens of the night vision device, enabling the user to effectively see in the dark.

**TN:** *Is that how night vision works today?*

**Sergeant Tyson:** Night vision technology has come a long way since then. The first improvements were in the creation of devices that did not need to project a beam of invisible light to work. These devices drew in the trace of light that was present from the moon, stars, or distant buildings. They intensified this light so that the user could see well at night.

Naturally, these devices did not work well on overcast or moonless nights since there was too little light to use. So night vision devices were improved by becoming increasingly sensitive to low-light conditions. This means they can now work on nights that are cloudy or moonless and can view a person up to 200 yards away, which is truly amazing progress. These newer devices usually use an image intensifier, which brings light in through two mirrors. They are remarkably effective.

**TN:** *What types of night vision devices are there?*

**Sergeant Tyson:** First, there are scopes, which are handheld rather than worn as goggles. They are typically *monocular*, meaning they use one eyepiece. Next, there are goggles, which are worn on a person's head. Goggles have two eyepieces, so they are called *binocular*. Finally, there are night vision cameras, which work and look like normal cameras, but they have a feature that makes shapes in the dark easier to locate. Many cameras that people buy today already have a night vision feature built in.

It is amazing that night vision has come such a long way and that it can be helpful in a number of different ways. If you find night vision as interesting as we do, there are night vision goggles for kids available at some toy stores. Whether you love to pretend you are a spy or just to find lost things in the dark, night vision goggles are an exciting accessory to have.

**Example Item 1**

**DOK Level:** 2

**English Language Arts (ELA) Grade 8 Content Domain:** Reading and Vocabulary

**Standard:** ELACC8RI1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

**Which sentence from the passage BEST supports the conclusion that many improvements have been made since the technology of night vision was invented?**

- A** But with the help of technology, humans have found a way to simulate, or recreate, night vision in order to see in the dark.
- B** Our research departments came up with a night vision scope that was given to 300 soldiers.
- C** This means they can now work on nights that are cloudy or moonless and can view a person up to 200 yards away, which is truly amazing progress.
- D** Many cameras that people buy today already have a night vision feature built in.

**Example Item 2**

**DOK Level: 3**

**English Language Arts (ELA) Grade 8 Content Domain: Reading and Vocabulary**

**Standard: ELACC8RI7.** Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.

**What are the advantages of including the two images in the passage? Use details from the passage to support your answer.**

**Scoring Rubric**

Points	Description
2	<p>The response achieves the following:</p> <ul style="list-style-type: none"> <li>gives sufficient evidence of the ability to explain the advantages of using images in the passage</li> <li>includes specific examples/details that make clear reference to the text</li> <li>adequately explains the use of images in the passage and supports it with clearly relevant information based on the text</li> </ul>
1	<p>The response achieves the following:</p> <ul style="list-style-type: none"> <li>gives limited evidence of the ability to explain the advantages of using images in the passage</li> <li>includes vague/limited examples/details that make reference to the text</li> <li>explains the use of images in the passage but supports it with vague/limited information based on the text</li> </ul>
0	<p>The response achieves the following:</p> <ul style="list-style-type: none"> <li>gives no evidence of the ability to explain the advantages of using images in the passage</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>explains the advantages of using images in the passage, but includes no examples or no examples/details that make reference to the text</li> </ul>

**Example Item 3****DOK Level: 4****English Language Arts (ELA) Grade 8 Content Domain: Writing and Language**

**Standard:** ELACC8W2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

In this section, you will read about the ongoing debate over the use of genetically modified (GM) food. What are the benefits and dangers of producing and consuming foods that have been genetically modified? You will write an argumentative essay in your own words supporting either side of the debate in which you argue for or against the use of GM food.

Before you begin planning and writing, read the two texts:

1. "GM Food Saves Lives"
2. "What We Don't Know About GM Food Can Kill Us"

As you read the texts, think about what details from the texts you might use in your argumentative essay.

**GM Food Saves Lives****by Rebecca Wilson**

Genetically modified (GM) food was introduced to the citizens of the United States in 1994. Since then, the use of genetics on produce and animals has become so widespread that each person in the United States is most likely eating GM food daily. A primary reason for its popularity is how beneficial it is to people and businesses.

**What is genetic modification?**

Plants and animals naturally go through a process of selection for survival. Features that make the plant or animal more likely to live are passed along, and features that are not advantageous are weeded out. These genetic mutations occur over generations, though, making improvement a slow-moving process. Scientists discovered that they could improve specific characteristics quickly by introducing foreign genes into an organism, such as those from plants, animals, and even viruses. For example, exposing a plant to a certain virus can make it more resistant to disease. Transferring genes from cows to pigs can help the pigs create more milk for larger litters of piglets. The targeting of genes allows scientists to bring out the specific traits of a product that will make it more successful.

**Uses of GM foods**

There are three main reasons for genetically modifying food: to produce more food at lower cost, to increase the health value of the food, and to make the food more desirable. When crops are modified to withstand disease and drought, it takes fewer resources to produce them, and fewer crops are lost. But altering food goes much further than this. Scientists are also able to make food more nutritious. For example, Golden Rice is infused with vitamin A in the hopes of saving the lives of children suffering from vitamin A deficiencies. However, the earliest uses of GM food are still the most

popular. Genetic modification makes food look and taste better. Tomatoes stay ripe longer. Apples have fewer bruises. Strawberries grow larger.

**Safety**

Opponents of GM food say that changing an organism's genetic code is dangerous. They say that changes to a plant's durability can create superweeds that kill crops and that altering nutrition values could cause health problems for the people who eat the food. Yet thousands of research studies have shown no evidence that GM food causes harm, either to the environment or to people. It's safe, effective, and needed in a time when food shortages are skyrocketing.

**What We Don't Know About GM Food Can Kill Us**

by Daniel McLeod

Humans have a history of moving forward with great ideas—until they realize that those ideas weren't so great. Back in the 1940s, people around the world started using a miracle insecticide called DDT ("dichlorodiphenyltrichloroethane"). It killed every annoying insect out there! It was helping to eliminate malaria-carrying mosquitoes and life-threatening spiders. DDT was the best insecticide ever—until people realized the severe damage it was doing to the environment. It took over thirty years of using the chemical agent for scientists to verify the problems and for countries to ban DDT's use. Only now, seventy years since it became popular, are some of the species negatively affected by it finally regaining a foothold on life.

Genetically modified (GM) food is our generation's DDT. Just as before, people have jumped headlong into the process of making food better, stronger, and different through changes to an organism's genetic code. Scientists are altering plants and animals at their most fundamental levels with no regard to the effects we might see in twenty, thirty, or even seventy years from now. True, this process is producing food at a lower cost and higher rate, something this world desperately needs, but at what cost?

There have been documented cases of genetically altered crops affecting the durability of weeds that compete for the crops' resources. It's believed the genetic mutation of the crops spread to the weeds. These weeds, called superweeds, are aggressive and resistant to the chemicals used to kill them and now threaten the crops' growth. Another current problem is the reduction in insects such as butterflies and bees, which pollinate flowers. Crops designed to produce natural insecticides are killing off these important creatures. The ecosystem is thrown off balance without them.

Those problems are nothing compared to the ones we don't know about yet. How will these modifications affect the humans who consume this food over a lifetime? How will unforeseen mutations affect the food? These questions can't be answered right now since we won't see the effects for decades.

The biogenetics companies that produce GM food say the food has been tested by thousands of studies. What they don't say, however, is that they are the ones who funded the studies. Their financial interest in studies showing that GM food is safe compromises the believability of the studies. How might their corporate dollars have affected the results the scientists are reporting?

The plain truth is that we don't know how GM food will affect humans, plants, and animals in the future. We shouldn't be risking our lives by eating altered food without knowing whether or not genetic modification is another DDT.

Now that you have read "GM Food Saves Lives" and "What We Don't Know About GM Food Can Kill Us," create a plan for your argumentative essay.

Think about ideas, facts, definitions, details, and other information and examples you want to use. Think about how you will introduce your topic and what the main topic will be for each paragraph. Be sure to identify the sources by title or number when using details or facts directly from the sources.

Write an argumentative essay in your own words supporting either side of the debate in which you argue for or against the use of GM food. Be sure to use information from both texts.

Now write your argumentative essay. Be sure to:

- Introduce your claim.
- Support your claim with logical reasoning and relevant evidence from the texts.
- Acknowledge and address alternate or opposing claims.
- Organize the reasons and evidence logically.
- Use words, phrases, and clauses to connect your ideas and to clarify the relationships among claims, counterclaims, reasons, and evidence.
- Establish and maintain a formal style.
- Provide a concluding statement or section that follows from and supports the argument presented.
- Check your work for correct usage, grammar, spelling, and capitalization.

*Write on separate paper.*